

Abstract

A method for retrieving critical data determined to be requested by a host device in the near future and re-allocating the critical data on the hard drive medium. The hard drive provides the critical data to the requesting host upon receiving the request, thereby eliminating the time required to respond to the request due to media accessing. Thus, the cache of the present invention may use old data rather than new data or the last data accessed. The critical data can be written to reserved areas of the media that provide desirable read characteristics. In this aspect, the present invention may trade drive capacity and/or media write speed for media read speed. The critical data maybe re-allocated and placed in sequential order, thereby saving time from seeking to different locations over the media. Critical data may stored in FLASH memory, providing quicker data access while consuming less power. While the hard drive is in low power states, other data can be written to FLASH in order to conserve energy.